Design Tools
Section 3

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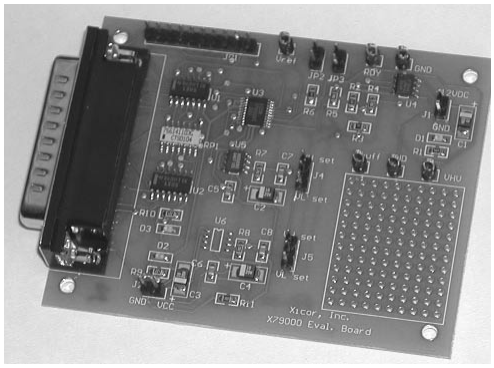


Development Tool Name:

X79000 Evaluation Board Tool Kit for Nonvolatile Subranging DAC Bias and Control

Ordering Information:

Order from Xicor Sales

Code: X79000EVAL

Devices Supported:

X79000 Nonvolatile DAC with Programmable Output Range, X60008-25 precision low tempco reference.

Typical Applications:

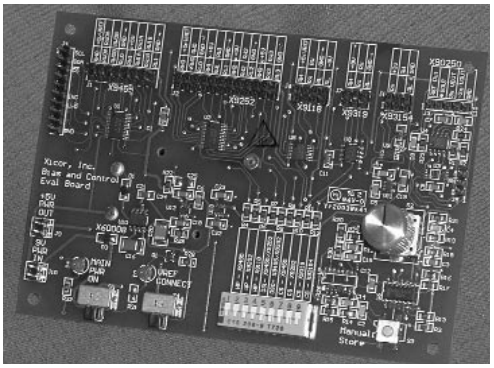
Precision Instrumentation, Sensor Biasing, Offset Control, Bias control with variable resolution.

Description:

The X79000 Evaluation board and LabVIEW PC software demonstrate a versatile DAC function which allows the output range to be tailored to the application. Nonvolatile registers for DAC value and output span permit permanent storage of in-circuit programmed values. An X60008-25 reference is included for demonstration of both the DAC's internal reference and an external reference. A high voltage opamp with gain is included for higher output voltage control. The softare allows programming of all registers, as well as implementing an UP/DOWN control for moving the output voltage up or down in discrete steps. Kit includes board, software CD and user guide manual.

Requirements:

Windows PC operating with Windows 95, 98, 2000, XP operating systems. Uses a PC Parallel port interface. Knowledge of LabVIEW not required for prototyping, since Windows GUI is available.



Development Tool Name:

Bias and Control Evaluation Board Tool Kit for XDCP and Precision Voltage Reference Demonstration

Ordering Information:

Order from Xicor Sales

Code: XDCP_VREF_EVAL

Devices Supported:

X9118, X95840, X9455, X9319, X93256 DCP's and the X90250 and X60008-50 references.

Typical Applications:

Offset and Bias adjustment, data conversion references, precision DAC control, gain and filter bandwidth control.

Description:

The Bias and Control Evaluation Board combined with the XDCP LabVIEW software demonstrates versatile analog circuit control using both serial bus and mechanical interface operation. The board contains multiple DCP devices with resolution from 6 bits to 10bits, and two precision references. Board layout is optimized for highly accurate voltage measurements, including numerous test points to monitor the wiper settings. There is a unique rotary encoder control circuit which allows mechanical control of digital potentiometer position, as well as nonvolatile storage of wiper position. Serial Interface requires use of the Xicor "Digital Screwdriver" evaluation board and software. Power options include a 9V battery or external bench supply.

Requirements:

Windows PC operating with Windows 95, 98, 2000, XP operating systems. Uses a PC Parallel port interface. Knowledge of LabVIEW not required for prototyping, since Windows GUI is available.

Development Tool Name:

"Digital Screwdriver" Tool Kit. Hardware and Software to Evaluate Xicor's Digital Potentiometers Using Windows and/or LabVIEW

Ordering Information:

Order from Xicor Sales

Code: XLABVIEW01

Devices Supported:

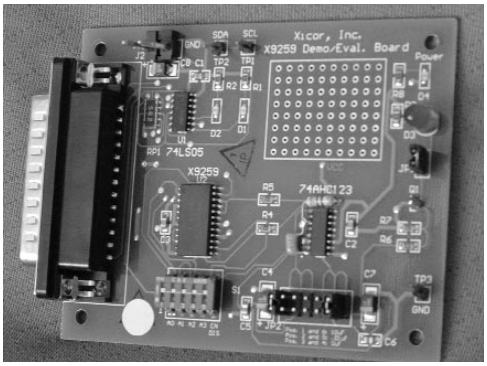
All Digital Potentiometers, Digital Capacitor, X79000 12-bit DAC and the X4023x Family

Description:

Buffer I/O Card with parallel port interface to program XDCP or Digital Capacitors. CD-ROM contains Windows and LabVIEW drivers for each device. Just select the device and program via the parallel port. Includes user manual.

Requirements:

Standard Windows PC, Knowledge of LabVIEW not required for prototyping, since Windows GUI is available, some required bread boarding to set up device under test, will need to order Xicor device samples separately. Go to Xicor's website to download latest software updates. www.xicor.com (see LabVIEW drivers for Digital Screwdriver)



Development Tool Name:

Using Digital Potentiometers for Pulse Width Modulation

Ordering Information:

Order from Xicor Sales

Code: X9259EVAL

Devices Supported:

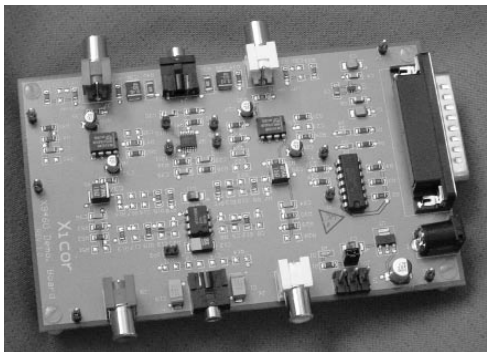
X9259 Digital Potentiometer

Description:

Use of X9259, a Digital Potentiometer, along with a 74AHC123 (One Shot) to demonstrate a fully programmable pulse generator (frequency and duty cycle controlled) for 1% to 100% duty cycle control; or 1Hz to 500 kHz control. Parallel port input for PC control GUI.

Requirements:

Standard Windows PC, Need to download Xicor's LabVIEW drivers to program the X9259 thru the parallel port with a PC. www.xicor.com (see LabVIEW drivers for Digital Screwdriver)



Development Tool Name:

X9460 Evaluation Board Tool Kit for Stereo Audio Control

Ordering Information:

Order from Xicor Sales

Code: X9460EVAL

Devices Supported:

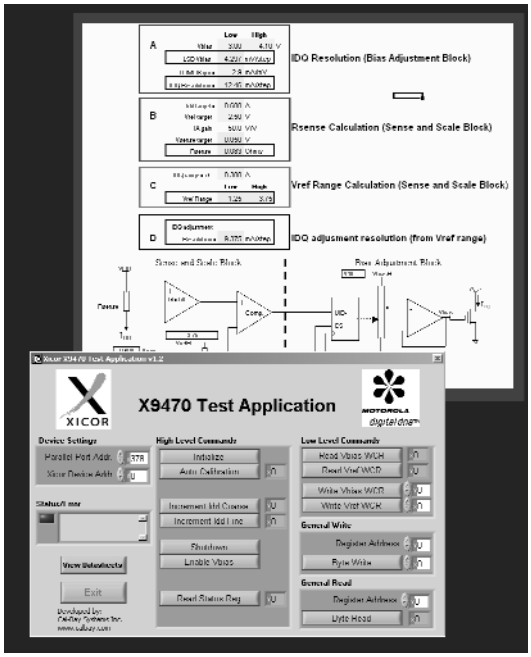
X9460 Dual Audio Log Taper Digital Potentiometer

Description:

Evaluation board featuring the X9460 Dual Audio Log Taper Digital Potentiometer demonstrating stereo control of audio signals. Hardware includes input/output for RCA phono and headphone jacks. Software uses Xicor's "Digital Screwdriver" LabVIEW tool (downloadable from Xicor). Includes user manual.

Requirements:

Standard Windows PC, Knowledge of LabVIEW not required for prototyping, since Windows GUI is available. Go to Xicor's website to download latest software updates. www.xicor.com (see LabVIEW drivers for Digital Screwdriver)


IDQ Resolution (Bias Adjustment Block)
Rsense Calculation (Sense and Scale Block)
Vref Range Calculation (Sense and Scale Block)
IDQ adjustment resolution (from Vref range)
X9470 Test Application

Development Tool Name:

X9470 Software and Design Spreadsheet

Ordering Information:

Contact Xicor Sales for Software CD and Xicor ProgramIC Board
Visit www.xicor.com for Design Spreadsheet and Application Notes

Devices Supported:

X9470 RFPA Bias Controller

Typical Applications:

Cellular Basestation Power Amplifiers, LMDS Power Amplifiers, Point-to-Multipoint and other amplifier bias applications

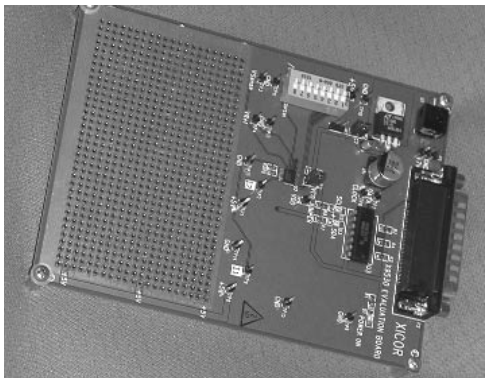
Description:

The X9470 Software uses LabVIEW drivers and operates with the Xicor ProgramIC board to control the X9470 device on a breadboard. All functions of the X9470 are controlled, including setting the Vbias output, setting the bias reference level, and setting the closed loop gain. Also included are functions for automatic closed loop bias calibration and recalibration. EEPROM Storage of final values is performed with a separate command. No knowledge of LabVIEW is require to use the tool.

The X9470 Design Spreadsheet allows designers to enter parameters for their bias application and examine the resulting control from the X9470 device. Fine tuning of a bias circuit is possible before the breadboarding stage with this tool. Optimization of bias control range and resolution are the main functions of the spreadsheet.

Requirements:

Windows PC operating with Windows 95, 98, 2000, XP operating systems. Uses a PC Parallel port interface.



Development Tool Name:

X9530 Evaluation Board Tool Kit for Laser Diode Calibration

Ordering Information:

Order from Xicor Sales

Code: X9530EVAL

Devices Supported:

X9530 Temperature Compensated Laser Diode Bias Controller.

Typical Applications:

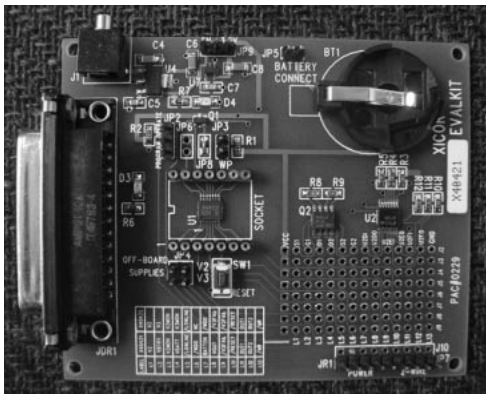
Compatible with Popular Fiber Optic Module Specifications: Xenpak, SFF, SFP, and GBIC

Description:

Evaluation board implements a PC interface and wall cube power supply demonstrating the X9530 device for Laser Diode Calibration.The software program (downloadable from Xicor) provides a Windows GUI and LabVIEW drivers to test the X9530 functions (temp sensor, ADC, DACs, Current Drivers, Lookup Table, and General Purpose EEPROM). Software includes special GUI and LabVIEW drivers available from Xicor Sales. Includes user guide manual.

Requirements:

Standard Windows PC, Knowledge of LabVIEW not required for prototyping, since Windows GUI is available. Go to Xicor's website to download latest software updates, www.xicor.com. See X9530 Design Support. (A password is required to download the software. The password is provided in the User Guide.)



Development Tool Name:

X40421 and X40435 Evaluation Board Tool Kit for System Management Applications (See also System Management Brochure for Design Ideas).

Ordering Information:

Order from Xicor Sales
Two different evaluation boards.

Code: X40421EVAL and X40435EVAL

Devices Supported:

- X40421 Dual CPU Supervisor with Programmable Watchdog Timer, Power On Reset, Master Reset, Battery Backup with Switch, 4K bit EEPROM, Remote Fault Detection of Voltage Monitors, 2-wire bus
- X40435 Triple CPU Supervisor with Programmable Watchdog Timer, Power On Reset, Master Reset, 4K bit EEPROM, Remote Fault Detection of Voltage Monitors, 2-wire bus

Typical Applications:

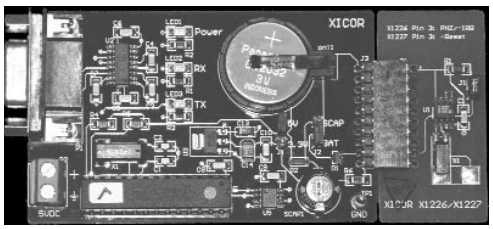
Communications Equipment (Routers, Hubs, Switches), Disk arrays; Industrial Systems, Process Control, Instrumentation, Computer Systems (Desktop Computers, Network Servers), Portable Applications

Description:

The evaluation board demonstrates either the X40421 or the X40435 to prototype for system management functions with Microcontrollers, Microprocessors, DSPs, and other various Memory Controller or Bus Bridge chips. Hardware and software allows the user to program the watchdog and power on reset control. Voltage monitors can work from 0.9V to 5V applications. Software also can be used to test for remote monitoring of voltage monitors via the 2-wire bus by reading the fault detection registers. The EEPROM is also accessible via the 2-wire bus using the software. Includes a user guide to step thru the operation of the board and software.

Requirements:

None for demonstration purposes. For advanced functions, a standard Windows PC is required to program the device thru the available Windows GUI interface via the parallel port.



Development Tool Name:

X1227 Real Time Clock Evaluation Board Tool Kit

Ordering Information:

Order from Xicor Sales
Two different evaluation boards.

Code: X1227MBEVAL

Devices Supported:

X1227 Real Time Clock with Dual Alarm Plus Watchdog, Temp Compensation, Battery Switch, 4kbits EEPROM

Typical Applications:

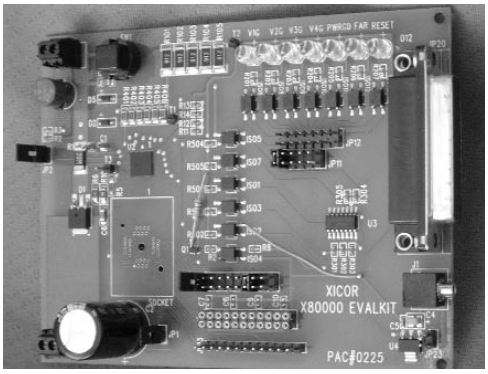
Communications Equipment (Routers, Hubs, Switches), Disk arrays; Industrial Systems, Process Control, Instrumentation, Metering Applications, Computer Systems (Desktop Computers, Network Servers), Portable Applications

Description:

A hardware evaluation platform that implements a microcontroller, low cost temperature sensor, a standard low cost crystal oscillator, and Xicor's Integrated Real Time Clock with Integrated EEPROM. Allows for prototyping of crystal oscillator characterization over time and temperature. Software allows user to set oscillator compensation for different temperatures to improve timing accuracy. Includes a user guide to step thru the operation of the board and software.

Requirements:

A standard Windows PC is required to program the device thru the available Windows GUI interface via the serial port.



Development Tool Name:

X80000 Hotswap and Power Sequencer Evaluation Kit

Ordering Information:

Order from Xicor Sales

Code: X80000EVAL

Devices Supported:

X80000 -48V Hotswap Controller with Power Sequencing and Advanced Fault Protection

Typical Applications:

Communications Equipment (Routers, Hubs, Switches, Basestations), Disk arrays; Industrial Systems, Process Control, Instrumentation, Metering Applications, Computer Systems (Desktop Computers, Network Servers)

Description:

A hardware evaluation platform features Xicor's X80000 -48V Hotswap Controller with Power Sequencing and Advanced Fault Protection along with on-board FET switch and opto-couplers to power sequence up to four secondary DC-DC sources. Allows for testing of -48V Hotswap including over voltage, under voltage, and overcurrent protection. The overcurrent setting can be set differently for insertion and normal operation modes. Also allows for in-circuit programmable delays for DC-DC enable/disabling for sequencing of four DC-DC sources. The software Windows GUI interface allows the user to 1) program the hardshort detection and retry mechanism; 2) select the gate current for the external FET to change the charge profile to handle different loading.

Requirements:

A standard Windows PC is required to program the device thru the available Windows GUI interface via the parallel port.

Development Tool Name:

3-cell Prismatic Li-Ion Battery Pack Evaluation Kit.

Ordering Information:

Order from Xicor Sales

Code: X3101EVAL

Devices Supported:

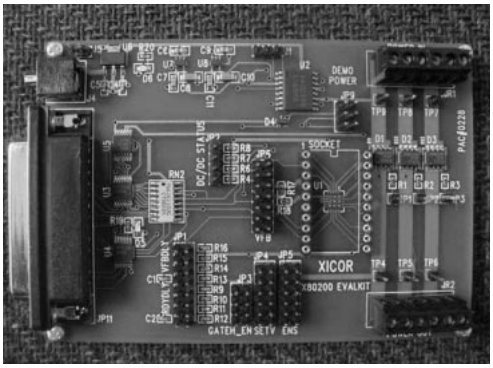
X3101 Battery Safety Unit

Description:

3 cell Li Ion Prismatic Battery Pack
Target market: Notebooks and Special Industrial / Medical
Battery pack contains connector interface (X3101 integrated into battery pack with microcontroller). Software available to demonstrate Cell Balancing

Requirements:

Knowledge of Li-Ion or Li-polymer battery packs and cell balancing.
PC required for software. Windows 95 / 98 ONLY.



Development Tool Name:

Power Sequencing, X80200 Evaluation Kit (see also X80140 evaluation kit)

Ordering Information:

Order from Xicor Sales

Code: X80200EVAL

Devices Supported:

X80200 Power Supply Sequencer with Power-Up and Power-Down. System Monitoring with Triple Voltage Monitors

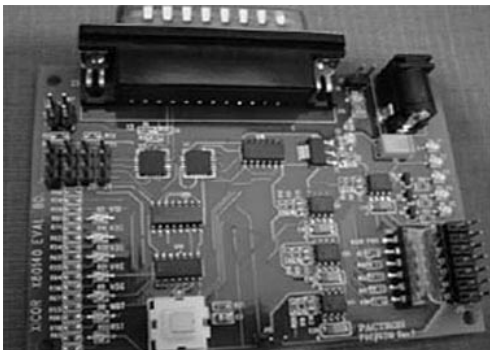
Description:

Multi-voltage Power Sequencing Using N-channel FETs Evaluation Platform

Requirements:

Hardware (standalone) demonstrates: Power sequencing using either Voltage Feedback or Enable (fixed delay) between three independently controlled charge pumps. Contains on-board voltage regulators or external connection to voltage sources. Contains three FET switches (IRF7413) or connect to external FETs

CD software demonstrates: In circuit programmability to adjust the feedback voltage trip point between the charge pumps (using external XDCP X40429). Read the fault detection register to monitor the charge pumps ON/OFF via serial bus. Windows 98, 2000, NT.



Development Tool Name:

Time Sequencing & Voltage Monitors, X80140 Evaluation Kit (see also X80200 eval kit).

Ordering Information:

Order from Xicor Sales

Code: X80140EVAL

Devices Supported:

X80140 Voltage Supervisor/Sequencer. Quad Programmable Time Delay with Local/Remote Voltage Monitors.

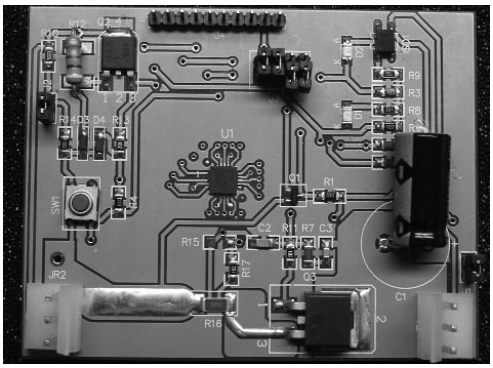
Description:

Multi-voltage Power Sequencing Using 5 independent Voltage Regulators and Time Sequencing the ON/OFF signals to create various power sequencing solutions.

Requirements:

Hardware (standalone) demonstrates: Power sequencing by using both a X80140 and X80120 as voltage monitors and time sequencers. 5 DC regulators are power-on and power-down sequenced. The time between the turn-on of each DC regulator is in-circuit programmable via the X80140 to be from 100ms to 5 seconds. A low cost watchdog and logic circuits are implemented to demonstrate multi-voltage monitoring for power up and power down. No external FETs are required. No oscillators or crystals are required for timing.

CD software demonstrates: In circuit programmability to adjust the timing between DC regulator ON/OFF. Windows 98, 2000, NT.



Development Tool Name:

-48V Hotswap, X80070 Evaluation Kit

Ordering Information:

Order from Xicor Sales

Code: X80070EVAL

Devices Supported:

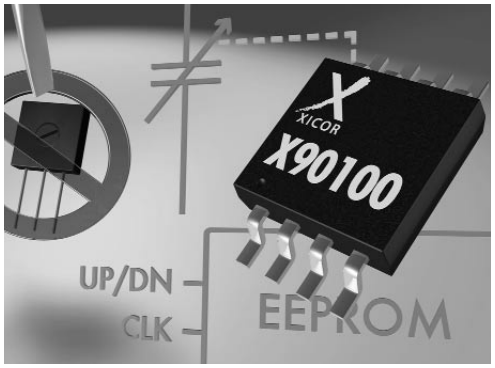
X80070 Hotswap Controller with Advanced Fault Protection and Voltage Regulator Output

Description:

Demonstrates replacement of LT1640. Shows major advantages: Programmable gate current for FET slew rate control via the IGQ “Quick current select” pins and the VREG output. Insertion overcurrent over-limit and noise filter.

Requirements:

Hardware (standalone) demonstrates: -48V hotswap and and overvoltage, undervoltage, overcurrent protection. Capability to select various gate currents to change charging profile of external FET.



Development Tool Name:
X90100 Evaluation Board Tool Kit and Software

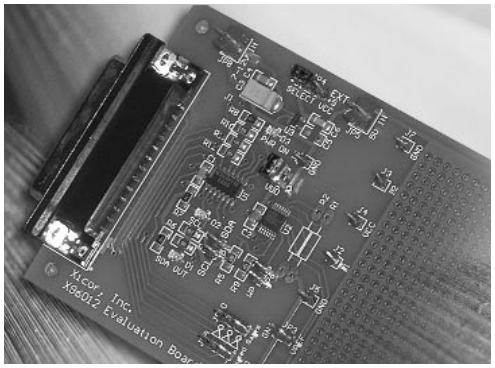
Ordering Information:
Order from Xicor Sales

Code: X90100EVA

Devices Supported:
X90100 Digitally Programmable Capacitor

Description:
An evaluation board with an 8 MHz crystal oscillator circuit which utilizes the X90100 for frequency pulling of the crystal. No software is required, as 3 switches increase, decrease, or store the value of the capacitor. Precise control of oscillator frequency, nonvolatile storage, and low temperature drift are demonstrated with this board. Includes User manual.

Requirements:
Lab equipment including power supply and frequency counter or oscilloscope. No PC required.



Development Tool Name:
X9601x Evaluation Board Tool Kit and Software

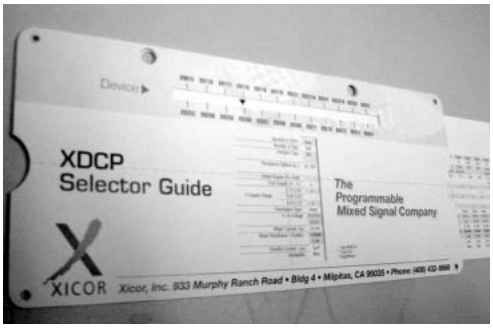
Ordering Information:
Order from Xicor Sales

Code: X9601xEVAL

Devices Supported:
X96010, X96011 and X96012 temperature compensated bias controllers

Description:
Evaluation board with PC interface and software to demonstrate the programmable capabilities of the X96012 in bias control circuits. The software program provides a Windows GUI and LabVIEW drivers to operate the X96012 functions (temp sensor, ADC, DACs, Current Drivers, EEPROM Lookup tables and General Purpose Memory). Accepts 5V or higher power supplies and also allows easy hardware adjustment of output current. Includes User Manual. Software program can also be used with X96010 and X96011 devices in breadboard circuits and is downloadable from Xicor.

Requirements:
Standard Windows PC with Windows 95, 98, 2000 or XP operating systems. Uses a PC Parallel port interface (cable not included).



Development Tool Name:
Digital Potentiometer Selector Tool

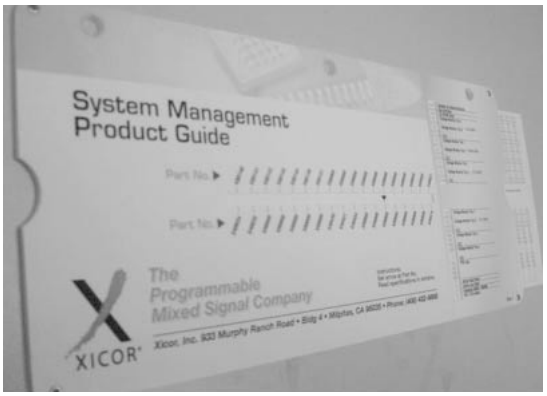
Ordering Information:
Order from Xicor Sales

Code: XDCP_Selector

Devices Supported:
All Digital Potentiometers

Description:
"Slide Rule" style Digital Potentiometer Selector. Xicor has the largest selection of Digital Potentiometers in the World. Use this tool to simplify your selection. Hundreds of device options.

Requirements:
Slide and choose the Right potentiometer for your needs.



Development Tool Name:
System Management Selector Tool (see Also System Management Design Ideas Guide)

Ordering Information:
Order from Xicor Sales

Code: SMP_Selector

Devices Supported:
All System Management Products

Description:
"Slide Rule" style System Management Product Family Selector. Xicor has hundreds of solutions with various number of voltage supervisors with options that include Watchdog Timers, Power-On Recall, Battery Monitors and Switching, Real Time Clocks, and Non-volatile Memory. Use this tool to simplify your selection.

Requirements:
Slide and choose the Right system management device for your needs.